

IN THE CLAIMS:

The text of all pending claims (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 2-4, 7, 17-18, and 23-25 in accordance with the following:

1. (CANCELLED)
2. (CURRENTLY AMENDED) A non-contact IC card reader/writer device, comprising:
 - antennas that perform transmission and reception of carrier waves between the non-contact IC card reader/writer device and a non-contact IC card; and
 - a control unit to process signals obtained from the antennas and to calculate a location of the non-contact card; wherein:
 - the antennas are arranged in a matrix on one plane; and
 - the control unit alternately drives the antennas, obtains location information from the non-contact IC card and, based thereon, calculates the two dimensional location of the non-contact IC card on said one plane, and detects a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card.
3. (CURRENTLY AMENDED) A non-contact IC card reader/writer device, comprising:
 - antennas that perform transmission and reception of carrier waves between the non-contact IC card reader/writer device and a non-contact IC card; and
 - a control unit to process signals obtained from the antennas and to calculate a location of the non-contact card; wherein:
 - the antennas are arranged in a matrix on one plane; and
 - the control unit sequentially drives the antennas, ~~and~~ calculates the two-dimensional location of the non-contact IC card on said one plane based on the distribution of the locations of the antennas that have received a response from the non-contact IC card, and detects a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card.

4. (CURRENTLY AMENDED) A non-contact IC card reader/writer device, comprising:

antennas that perform transmission and reception of carrier waves between the non-contact IC card reader/writer device and a non-contact IC card; and

a control unit to process signals obtained from the antennas and to calculate a location of the non-contact card; wherein:

the antennas are arranged in a matrix on one plane, and further comprising:

a detector that drives all the antennas at once, and detects the voltage level of each of the carrier waves received from the non-contact IC card via the antennas; and

the control unit calculates the two-dimensional location of the non-contact IC card on said one plane, based on the voltage levels detected by the detector and the locations of antennas that have received the carrier waves, and detects a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card.

5. – 6. (CANCELLED)

7. (CURRENTLY AMENDED) An input device, comprising:

a non-contact IC card reader/writer device;

antennas that perform transmission and reception of carrier waves between the non-contact IC card reader/writer device and a non-contact IC card;

a detector that detects the voltage level of each of the carrier waves received from the non-contact IC card via the antennas which are arranged in a matrix on one plane; and

a control unit that drives the antennas so that the antennas are alternatively, sequentially, or simultaneously driven, ~~and calculates a two-dimensional location of the non-contact IC card on said one plane from communications with the non-contact IC card,~~ and detects a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card.

8. – 16. (CANCELLED)

17. (CURRENTLY AMENDED) A method of detecting the location of a non-contact IC card, comprising:

performing carrier wave transmission and reception with the non-contact IC card through sequential driving of antennas arranged in a matrix on one plane;~~and~~

processing signals obtained from carrier waves received by the antennas and calculating the location of the non-contact IC card, based on distribution of the locations of antennas that have received a response from the non-contact IC card; and

detecting a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card.

18. (CURRENTLY AMENDED) A method of detecting the location of a non-contact IC card, comprising:

performing carrier wave transmission and reception with the non-contact IC card through simultaneous driving of antennas arranged in a matrix on one plane;

detecting the voltage level of each carrier wave received from the non-contact IC card through the antennas;~~and~~

processing signals obtained from carrier waves received by the antennas and calculating the location of the non-contact IC card, based on the voltage levels detected in the detecting step and the locations of antennas that have received the carrier waves; and

detecting a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card.

19. - 22. (CANCELLED)

23. (CURRENTLY AMENDED) A method of detecting a location of a non-contact IC card, the method comprising:

performing carrier wave transmission and reception with the non-contact IC card through antennas of a non-contact IC card reader/writer device arranged in a matrix on one plane;

driving the antennas so that the antennas are alternatively, sequentially, or simultaneously driven;

calculating a two-dimensional location of the non-contact IC card on said one plane from communications with the non-contact IC card;

detecting an input operation, performed on a touch pad by an operator, by detecting a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card; and

outputting input information detected from the touch pad, in response to a request issued

from a device provided outside of the non-contact IC card reader/writer device.

24. (CURRENTLY AMENDED) A non-contact IC card reader/writer device, comprising:

antennas that perform transmission and reception of carrier waves between the non-contact IC card reader/writer device and a non-contact IC card; and

a control unit that drives the antennas so that the antennas are alternatively, sequentially, or simultaneously driven, ~~and~~ calculates a two-dimensional location of the non-contact IC card on one plane from communications with the non-contact IC card, and detects a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card.

25. (CURRENTLY AMENDED) A method of detecting a location of a non-contact IC card, comprising:

performing carrier wave transmission and reception with the non-contact IC card through antennas of a non-contact IC card reader/writer device arranged in a matrix on one plane;

sequentially driving the antennas; ~~and~~

calculating a two-dimensional location of the non-contact IC card on said one plane from communications with the non-contact IC card; and

detecting a difference between successive locations of the non-contact IC card to provide a pointer function based on movement of the non-contact IC card.